WEAPON INDEXING AND WEAPON RATIOS IN ARMS CONTROL

Executive Summary

- Historical precedents do exist for weapon indexing.
- Six negotiations attempted between 1922-1936.
  - -- Two failed to reach agreement
  - -- Four resulted in treaties
  - -- All efforts terminated by World War II
- Current US-USSR debate over ALCM versus missile issue is reminiscent of World Disarmament Conference of 1932 -- which ended in collapse.
- Among politically active nations, competition for military arms represents the competition for the balance of power.
  - -- Weapon ratios become surrogates for a "legitimized" distribution of power.
  - -- Each nation is compelled to strive for best advantage.
  - -- Agreement to a less-than-equal ratio would imply acceptance of unequal "balance" and inferiority.
  - -- Consequence is the "unreality of balance" in practice and application.
- Historical observation
  - -- Agreement on weapon ratios is possible only to the extent that nations can agree on a mutually satisfactory distribution of power.
- Implications
  - -- Non-negotiability of balance implies a non-negotiability of ratios.
  - -- Neither the US nor the USSR is likely to concede, via treaty, an advantage in balance, i.e., ratios.

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ARMS CONTROL

A problem of recent concern in US-USSR strategic arms control negotiations is that of how to relate US advantages in bombers to Soviet advantages in missiles. One solution method suggests the use of an index factor, a weapon ratio, that would specify an allowable ratio between bomber and missile weapons. Theoretically, this ratio would be derived as a function of the characteristics of these weapons: time of flight, size, number, yield, equivalent megatonage, ability to penetrate defensive systems, etc. The current question is "How many American ALCMs equal how many Soviet missiles?"

Another question, asked by proponent and opponent alike, is whether or not the derivation of such a ratio is possible. While an analytical proof may not avail itself to either side, arms negotiation experiences of the 1920s and 1930s can provide some useful insights and historical precedents for addressing the question of ratios.

Historical Precedents

The current bomber versus missile issue between the US and USSR is reminiscent of the conflict between France and Germany during the World Disarmament Conference of 1932. France insisted upon its need for a larger army than Germany's because of the larger German population and its greater rate of increase. (The US insists upon compensation for the larger Soviet air defense network). Germany countered by pointing to the superiority of the French in trained reserves. (The Soviets counter by pointing to the US superiority in bombers and bomber weapons, particularly ALCMs). How was the size of the French army to be equated to excess German population? What was the value of 100,000 trained French reservists in terms of a corresponding number of potential effectives in the German Army? Was it 50,000, 60,000, 100,000 or perhaps 120,000? (The contemporary question is what is the value of American ALCMs in terms of a corresponding number of Soviet missile warheads?

FOOTNOTE: Many of the notions expressed in this paper were extracted from Hans J. Morgenthau, "Politics Among Nations", Fifth Edition, Revised, 1978.

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The Making of Treaties and Ratios

The first attempt at using ratios was the Washington Treaty of 1922 for the Limitation of Naval Armaments. This treaty established ratios in capital ships between the US, Great Britain, Japan, France, and Italy. The treaty required the US, Great Britain, and Japan to scrap 40 percent of their capital ships, and it stipulated that replacements, to begin in 1931, would be set at a ratio of 5:5:3:1.67:1.67 in capital ships by 1942 for each of the respective nations. The treaty, however, did not limit other vessels such as cruisers, destroyers, and submarines.

The Geneva Naval Conference of 1927, attended by only the US, Great Britain, and Japan, likewise failed to reach agreement on the issue of ratios for the lesser naval craft.

Next came the London Naval Conference of 1930 at which the US, Britain, and Japan agreed to parity between the US and Britain for cruisers, destroyers, and submarines; with Japan limited to approximately two-thirds of the US-British strength. France and Italy refrained from signing since they were deadlocked by Italy's demand for parity with France to which France would not concede.

The World Disarmament Conference met in Geneva in 1932, but ended in failure with Germany's withdrawal in 1933. The center of controversy was the discord between France and Germany over the ratios of their respective armies. The First World War had left France the most dominant and Germany the least dominant military powers in Europe. Germany's avowed purpose at the conference was to change this distribution of power by obtaining a recognition of "equality of rights" with France that would gradually transform, over a span of years, into actual equality in armaments. France countered this German notion of equality with a principle of security which, by French definition, meant that any increases in German military strength could be matched by increases in French power. For Germany to give up the demand for equality in armaments would have meant accepting its inferiority as permanent and legitimate. For France to acquiesce in its demands would have meant relinquishing its position of preponderence and condoning the rebuilding of Germany's military strength. As noted by Hans Morgenthau, "To expect that France and Germany could agree upon the ratio of their respective armaments was tantamount to expecting them to agree upon a relative distribution of power." The impasse with respect to an armaments ratio was a manifestation of their struggle for predominance. Germany wanted to achieve it; France wanted to maintain it.

Another 1930s attempt to use ratios as a means for arms limitation was the 1935 Anglo-German agreement which limited Germany to 35 percent of the total British naval tonnage and allowed German-British parity in submarines. The final treaty, the London Naval conference of 1935-36, saw an agreement among Great Britain, the US, and France (and later Germany and the USSR) which limited the maximum size of naval vessels.

Success or Failure?

In all cases of agreement or disagreement, the central issue was the rationed distribution of power, the struggle for balance, among the nations involved. Each for his own purpose was seeking to legalize or legitimize his position in relation to the others. Each nation was trying, at worst, to maintain the existing power distribution and, at best, to change it in their own favor. Whether between two nations or among many, the agreements to allocate different types and quantities of armaments to different nations reflected one of three purposes.

1. The desire for the absence of competition (usually between friendly nations).

2. The imposition of the preponderance of one or more nations over another to secure positions favorable to themselves.

3. The preference, for the time being, for regulated rather than unregulated competition for armaments.

Each of the treaties, and its relative success or failure, was played out against the politics and power of the era. The US and Great Britain, recognizing Japan's growing naval strength and wanting to avoid a post WW I arms race, joined forces to "legalize" Japan's inferiority. In 1935, Britain, seeing France's failure with Germany and Germany's resolve to re-arm, was driven by not how to stop German re-armament, but how to preserve British supremacy in the face of it without imposing upon herself an expensive re-armament program. In the three instances where agreement was reached, the ratios were benchmarked by the supremacy of a single power with all limits established relative to the maximum strength of the British Navy. The agreements also reflected a concern for technology. Great Britain argued that battleships tended to become obsolete at a faster rate than other vessels and were defensive weapons; whereas, submarines represented newer technology and were offensive weapons. The nations with small navies saw it the other way but acceded to the lesser ratios in order to legitimize their rights to build the newer small ships.

Among politically active nations, the competition for military arms reflects, and is, the competition for power. While the armament ratios served to temporarily limit the levels of military strength, these same ratios were poor surrogates for limiting the power ambitions of the participants.

The Unraveling of Peace

In December 1934, Japan served notice of its intention to terminate the Washington Treaty of 1922. It submitted to the London Naval Conference of 1935-36 a demand for parity in all categories of naval armament. As far as Japan was concerned her inferiority vis-a-vis Anglo-American supremacy was the product of a previous political situation. This demand was subsequently rejected by the US and Britain and, in consequence, Japan resumed its freedom of action. In keeping with this change in political climate, Germany, in April 1939, denounced the Anglo-German Agreement of 1935 and also resumed in law its freedom of action. Germany and Japan were no longer content to per-

petuate the existing power relationships in terms of mathematical exactitude but instead were seeking a distribution of power more favorable to their own interests. Shortly thereafter, all efforts at disarmament and arms limitation were interrupted by the Second World War.

The Calculations of Power

Nations arm themselves because they want to defend or because they want to attack. Since no nation can be absolutely certain that its evaluation of the distribution of power at any particular moment is correct, it must be confident that the errors in calculation, whatever they may be, will not put the nation at risk. In other words, the nation must provide for a margin of safety that will allow it to make erroneous calculations and still maintain its share of the balance of power. To this end, politically active nations engaged in the balance of power equation must actually aim not at a balance (i.e., equality) but at superiority of power in their own behalf. Since no nation can foresee how large its miscalculations might turn out to be, each must ultimately seek the maximum power obtainable under the present circumstances. Only in this manner can each nation hope to attain the maximum margin of safety commensurate with the maximum errors they might commit.

> ...all nations must always be afraid that their own miscalculations and the power increases of other nations might add up to an inferiority for themselves which they must at all costs try to avoid.

The consequence is the "unreality of balance" in calculating the distribution of power. The scale will never be exactly poised nor will the precise point of equality be discernible. Each nation poses itself as the guardian of balance, yet what each means to achieve is not balance but rather a distribution of power favorable to itself.

Historical Observations

Arms negotiations involving the use of weapon ratios are a reflection of the power relations among the nations concerned. The extent to which negotiated ratios reflect a measure of political stability and understanding will be dependent upon the extent to which these ratios reflect a mutually satisfactory distribution of power. History would argue that a precondition for the successful use of ratios is a satisfactory settlement of the power contest.

With regard to the use of ratios, Mr Morgenthau observes:

> There can be no answer to such questions in terms of mathematical exactitude...
>
> What answers there are to such questions must be sought by means of political bargaining and diplomatic compromise.
>
> Once the nations concerned have agreed upon a mutually satisfactory distribution of power among themselves, they can then afford to reduce and limit their armaments.

Implications

The lessons of the 1920s-1930s would suggest that ratios serve only temporary purposes. In the context of US goals in arms negotiations, the transient nature of ratios may not lend themselves to meaningful arms control agreements for either the US or the USSR. Non-negotiability of balance would imply the non-negotiability of ratios. Neither the US nor the USSR is likely to concede an advantage in balance, i.e., ratios. It is the individual nation, not international agreement, that is the guardian of balance. The Soviets learned this lesson when Hitler abbrogated his pact of non-aggression with Stalin. The price of naivete' is recorded in Russian history. The Soviets are not likely to repeat it.